

REMARKS

No claims have been canceled. New dependent Claims 78-79 have been added. Claims 1-5, 10-11, 23, 29, 30, 65, and 74-77 have been amended to define the invention with more clarity. Applicant submits that all amendments are supported by the application-as-filed and that no new matter has been added. Claims 1-11, 23-30, and 65-79 are now in the application. Reconsideration of the application is requested in light of the foregoing amendments and the following remarks.

Claim Objections

Claim 1 was objected to as having an extra "at" on page 4 line 6. Applicant respectfully traverses the objection in that the first occurrence of the word "at" referred to location and the second occurrence of the word "at" was part of the phrase "at least one". Accordingly, both uses of the word "at" were grammatically correct.

However, in the interest of moving the case toward allowance, and of removing issues, Applicant has replaced the word "at" with the word "by". Applicant submits that the meaning of the corresponding wording has not been changed, although the grammar is more fluid at the recited location in the claim.

In any event, Applicant submits that the objection has been rendered moot, and respectfully requests that the objection be withdrawn.

Rejection of Claims under 35 U.S.C. 103(a)

Claims 1-5 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Day (US 5,632,095). Applicant respectfully traverses the rejection. Applicant is perplexed by the course of the handling of the examination of Claim 1.

Prior to this paper, the last time Claim 1 was amended was in Amendment D, which was mailed 01/02/2004.

On 03/29/2004, the examiner rejected Claim 1 as obvious in view of the combination of Day and Leary.

Applicant submitted Appeal Brief 2 on 06/22/2004, arguing patentability of Claim 1. Of course, Claim 1 could not be, and was not, amended in Appeal Brief 2. Thus, Claim 1 in Appeal Brief 2 was exactly the same as Claim 1 as submitted on 01/02/2004.

By the current Office Action, dated 09/08/2004, the examiner has withdrawn the rejection of Claim 1 based on Day plus Leary, and has asserted a rejection of the same Claim 1 based on Day alone.

Applicant does not understand how a rejection based on a single reference can be sustainable in the face of the examiner's withdrawal of the rejection of the exact same claim, based on the exact same reference, plus another reference. Accordingly, Applicant has no choice but to traverse the current rejection.

Applicant now addresses the specifics of the examiner's rejection of Claims 1-5 in the Office Action dated 09/08/2004.

1. First item disputed regarding the rejection of Claims 1-5 - At page 3 lines 9-12 of the Office Action, the examiner states

"the markings indicating...where the front and back surfaces of respective lumber pieces [studs] are to intersect the respective said elongate piece of lumber"....

Applicant submits that the examiner has misinterpreted either Claim 1 or the reference. Referring to Applicant's specification, at page 13 line 21, the "front" and "back" surfaces of the stud lumber piece 24 are clearly taught, and shown in FIGURE 6, to be those surfaces which face along the length of the plate 10 which is printed with the stud locator markings.

Addressing the examiner's statement, Day does not have any markings which indicate where the front and back surfaces of the studs are to intersect the printed plate.

To the contrary, the Day stud locator marking is shown at 34 as a pair of closely spaced lines. Considering the other dimensional indicators on e.g. FIGURE 3 of Day, it would appear that the pair of lines 34 are spaced from each other by about 0.06 inch. Applicant submits that it defies logic to assert that parallel lines, which are spaced e.g. .06 inch from each other, can indicate the locations of opposing parallel surfaces of a stud which are 1.5 inches from each other.

Applicant acknowledges that Claim 1 makes no reference to a dimension between the leading and trailing edges of the marking. However, any such assertion by the examiner must fall on deaf ears as the examiner has the burden of showing, which has not been met. Namely, the examiner has not shown in Day any leading and trailing edges which are taught to, or which do, indicate locations for the front and back surfaces of the stud. Accordingly, this asserted ground of rejection based on Day must fail. Applicant respectfully requests withdrawal of the rejection.

2. Second item disputed regarding the rejection of Claims 1-5 - drawing liberally from the examiner's language at page 3 lines 9-12 of the Office Action, the examiner states

"the markings...being visually conspicuous by double-lines markings as shown in figures 2-3."

Applicant submits that the examiner has misinterpreted either Claim 1 or the reference. While the examiner may assert that the markings 34 are conspicuous on the edge of the board, the markings 34 on the "front"/top surface of the board are lost in the clutter, and are thus not conspicuous.

Referring to Applicant's specification, at page 13 line 21, the "front" and "back" surfaces of the stud lumber piece 24, as referred to in Claim 1, are clearly taught, and shown in FIGURE 6, to be those surfaces which face along the length of the plate 10 which is printed with the stud locator markings.

In order to clarify Claim 1, Claim 1 has been amended to recite that the markings, namely the markings which are claimed to be "visually conspicuous" are located on the "front"/top surface (10F) of the board. Thus, Claim 1 is limited to markings which are on the front surface of the board, and which are visually conspicuous on that front surface. Day simply does not meet that stated limitation. Accordingly, this asserted ground of rejection based on Day must fail. Applicant respectfully requests withdrawal of the rejection.

3. Third item disputed regarding the rejection of Claims 1-5 - The examiner goes on in the Office Action at page 3 lines 14-17 to assert that

"Examiner takes Official Notice the fact that lumber used in dwelling construction typically comes in bundles wrapped in straps. To provide Day's lumber in strapped bundles it would be obvious for delivery to the job site as this is a conventional technique."

Applicant acknowledges that lumber used in dwelling construction typically comes in bundles wrapped in straps. However, in order to then reach the conclusion that it would be obvious to deliver Day's lumber to the job site in bundles is to assume that the markings are placed on Day's lumber off the job site. Day does not say that. We don't know that. We cannot assume that. Day simply tells us that the lumber is marked. Nothing tells us where the lumber is marked, how it gets to the job site, what is its "marking" condition when it arrives at the job site. Perhaps the building sets up a printer at the job site and prints conventional lumber stock with the desired markings on an as needed basis.

Nonetheless, all the above is no more than speculation. The reference is silent regarding where the markings are applied, what condition the product is in when shipped to the job site, who applies the markings, where or whether a separate stock of marked lumber is maintained in a warehouse, or at the job site.

Since the reference is silent regarding any bundling of the marked lumber, the fact that unmarked lumber is commonly shipped to the job site in bundles does not instruct the

public that the Day marked lumber is shipped to the job site in bundles. Accordingly, the examiner has failed to make the required showing of prima facie obviousness, whereby the rejection must fail.

4. Fourth item disputed regarding the rejection of Claims 1-5 - The examiner goes on in the Office Action at page 4 lines 4-9, specifically with respect to Claim 5, to assert that it

"would have been...to arrange the markings at the desirable interval...consistently no more than 0.13"...obvious design choice based on desired use to particular building area...."

Applicant submits that no reference addresses precision of the locations of the markings as required in Claim 5. Applicant also respectfully points out that the construction trade is not known for its precision. Rather, it is quite common for a dimension at the job site, especially in residential construction, to deviate from a specified dimension, e.g. on a drawing, by 0.25 inch or more. For that reason, truss builders go to the job site, when the vertical framing is up, to take final measurements for building roof trusses. Similarly, e.g. window, door, electrical, plumbing installers do their dimensional work only when they have actual measurements of the framing which has been erected on the job site. For the examiner to assert obviousness of the recited level of precision in the construction trade is no more than a desire, a wish; which has no basis in fact in the actual practice of substantial portions of the trade.

Is a greater level of precision desirable? Certainly. But absent Applicant's teaching of how to achieve such precision by off-site printing of the lumber, no one knew how to achieve such precision at reasonable cost. Absent any teaching of corresponding precision in the references of record, the examiner's assertion is a wish list, not an obvious course of action. Accordingly, Applicant submits that the examiner has failed to carry his

burden of showing prima facie obviousness with respect to this fourth item of dispute, whereby the rejection must fail.

Applicant has set forth above three items of dispute with respect to the Examiner's rejection of Claim 1. In each instance, Applicant has shown that the Examiner has failed to carry his burden of showing prima facie obviousness. Any one such failure assures patentability of Claim 1, at least with respect to the rejections presented in the instant Office Action. Since patentability of Claim 1 has been shown three times, since each showing is effective to remove Day as an effective reference, Claim 1, and all claims dependent therefrom, are patentable over Day.

In addition, and separately, Applicant has shown patentable subject matter in Claim 5 whereby Claim 5 stands as being patentable on its own merits.

In light of the above, Applicant respectfully requests withdrawal of the rejections of Claims 1-5 which are based on the Day reference.

Claims 6-11, 23-30, and 65-77 stand rejected as unpatentable over Day (5,632,095) in view of Thomas (4,845,858). Applicant respectfully traverses the rejection.

Applicant refers to and reiterates the above arguments regarding the inapplicability of Day to the invention. Second, Applicant submits that is not obvious to combine Day and Thomas. Finally, if Day and Thomas are combined, such combination does violence to the teachings of both Day and Thomas.

The Examiner's Rejection is Wrong Under the Law

First, we review the teachings of Day and Thomas. Day teaches a framing lumber product which is printed or stamped with an abundance of markings, including (i) measurement marking lines spaced at $\frac{1}{2}$ inch intervals on both sides of a given face of the lumber product, (ii) the stud indicator markings, and (iii) numeric and alpha designations of

the significances of the respective marking lines. Thus, Day has turned the an ordinary piece of lumber into a giant measuring device which "*eliminates the need for additional tools and implements*", referring to "*tape measures, rulers, and carpenter's squares*" (column 1 line 10) whereby the framing "*procedure can be accomplished without having to carry additional tools*" (column 3 lines 28-29). Such markings are disposed along the full length of the lumber product. See FIGURES 2 and 3 of Day.

The large number of alpha and numeric indicators identify the significance of each of the marking lines, including "*inch indicators 38, half-inch indicators 40, foot/inch indicators 42, foot indicators 36, 16 inch spacer [stud] indicators and 24 inch spacer [stud] indicators 46....foot indicators 36 are shown within an inverted "V" shape, and 16 inch spacer indicators 44 are shown within circles*" (column 3 lines 6-11), and tell the user what the various marking lines refer to.

Thus the overall structure of the Day product is such that it carries a lot of measurement information, along with stud locator markings as additional information. However, the stud locator markings on the front of the piece of lumber are so well integrated with the abundance of measurement marking lines and other indicators that these stud locator markings (which correspond to the markings claimed in Claim 1) are not visually conspicuous, whereby the objectives of this invention, of reducing the level of skill needed to lay out top and bottom plates is not achieved. In addition, the structure of the stud locator markings is such that the locations of the leading and trailing sides of the studs where they intersect the plates is not defined on the plates.

Rather, Day's stud locator markings indicate generally the location desired for the mid-point of the stud thickness. Such imprecision is merely one more example of the general imprecision encountered in the construction trade, which is referred to above with respect to Claim 5. Such lack of position definition on the lumber product further fails to provide the precision and consistency objectives of the invention for assembling frame wall assemblies.

Thomas teaches a flexible template such as a roll of tape which is printed with spaced lines which represent repeated spacing of studs. The tape is readily portable, and is versatile in that the tape can be applied to a wide variety of substrates. Further, a variety of tapes can be brought to the construction site, each having a different print pattern, whereby the workers can apply the desired print pattern to any conventional stick of lumber

by simply applying the tape which has the desired pattern. So the tape has advantages such as versatility, whereby several rolls of tape, each having different print pattern, can be kept at the job site. These tapes can be applied to conventional, unprinted lumber, according to the needs of the job. Thus, the artisan cannot, without more, reject tape-applied patterns as being without merit. They can be quite cost effective, as tape can be printed quite economically. In addition, there is no need to stock a second supply of "printed" lumber.\

Such tape is also subject to error, in that the tape is applied to any given substrate by a construction-site worker. Further, such application is subject to many risks associated with construction site application.

In the instance asserted by the examiner, the tape is marked with stud locator markings. The tape is taught as being stuck to the plate lumber piece, and the studs placed over the tape on the plate. As indicated in Applicant's earlier Appeal Briefs and Reply Brief, addressing the Thomas reference and the Leary reference, the tape is made of a material which is not dimensionally stable.

It Would Not Have Been Obvious to Combine the References

Whatever the nature of the asserted combination structure which the examiner purportedly derives from the references, Applicant submits that such combination either would not have been obvious, or that any obvious combination would not, in any event, have arrived at the invention, or that any combination which does arrive at the invention includes a result which was not obvious from the references, and finally that neither of the references achieves Applicant's stated objective of reducing the requirement for skilled labor to locate studs on the plate.

While the examiner has asserted obviousness to combine, the examiner has shown no motivation to combine, other than hindsight reconstruction. The examiner states specifically at page 5 lines 17-20

"as taught by Thomas, there are situations where only stud locations are desirable...Day teaches that providing such indicia directly on the lumber rather than on a tape that needs to be attached has many advantages."

Applicant points out that there are at least 3 problems with the above statements.

1. The examiner has asserted obviousness without showing any motivation to combine. Applicant submits that without motivation, there can be no obviousness.

2. If the references are combined to arrive at the invention, the combination clearly does violence to, destroys the invention (measuring features) of Day. In addition, the reference of Thomas is arguably also destroyed, since the versatility of Thomas (on tape substrate), the cost effectiveness of Thomas (e.g. bring to the job site only unprinted lumber) is obviated.

3. The examiner states that Day teaches that his directly printed lumber has "many advantages". Applicant submits that the examiner has overstated the teaching of Day. All Day teaches in the way of advantages is that certain tools need not be carried by the workers.

At the same time, the examiner ignores the fact that Thomas also teaches advantages, related to using printed rolls of tape.

So which advantages shall win the decision of the person skilled in the art? In order for a the artisan, faced with a project to be solved, to arrive at any conclusion regarding obvious directions of solution, the artisan must first assess known advantages and disadvantages of the various options which are presented for consideration.

In looking at the art in general, e.g. the references of record, one finds, as products for assisting in laying out wood lumber framing pieces, four printed tapes (Thomas, Leary, Brandt, and Wagner) and a single instance (Day) of printing directly on the piece of lumber.

Each of the printed tape references teaches printing stud locator markings. And while Day does teach stud locator markings, Day essentially teaches conversion of the piece of lumber into a measuring device. When the markings of Day are compared to conventional measuring tapes and the like, one sees a striking resemblance between the marking pattern in Day and the marking pattern in a conventional e.g. steel tape of wooden ruler or

folding wood tape measure. Each has inch markings, foot markings, stud location markings, and the like. For the skilled tradesman, such proliferation of markings provides the ability to make a variety of measurements with a single tool. But it requires a substantial level of skill.

Consider the stud locator markings indicated at 34 in Fig. 3 of the "EXHIBIT A" combination. That piece of lumber has markings at $\frac{1}{2}$ inch spacings, including through the space where the stud is to be located. Since a conventional "stud" is 1.5 inches thick, the "EXHIBIT A" combination has added markings at $\frac{1}{4}$ inch spacing between ones of those $\frac{1}{2}$ inch markings, $\frac{3}{4}$ inch away from the "34" indication on the lumber piece. Given that positioning of the leading and trailing edge of the stud markings, and given the thickness of conventional studs at 1.5 inches, the leading surface of a stud can be placed at any of the markings in the vicinity of "34", and the worker will see a marking adjacent the trailing surface of the stud. Similarly, the trailing surface of the stud can be placed at any of the markings in the vicinity of "34" and the worker will see a marking adjacent the leading surface of the stud. Applicant submits that there is nothing "visually conspicuous" about the stud locator markings of Day on the front surface of the piece of lumber, nothing which would "quickly catch the viewer's eye" as recited in Claim 1.

The advantages of either Day or Thomas flow from either the print pattern or from the substrate on which the marking is placed. In Day, the substrate provides an advantage in that the marking is durable, and the dimensions of the substrate are stable. However, such product has a disadvantage in that, once the marking pattern is printed on the substrate, that piece of lumber has only one possible marking pattern, regardless of where that piece of lumber is shipped. Thus, the printed piece of lumber, because of its added "print" cost, can lose its added efficiency benefit if the piece of lumber is used in the specific way intended. Certainly, the lumber can be used other ways, but without gaining advantage from the additional cost of the printing. In such instance, the user will likely need to stock multiple inventory items, some with markings, others without markings.

Since applying the markings has an attendant cost, the user tends to stock multiple inventory items rather than purchase only the more costly printed stock. In addition, the pattern provides a good basic measuring capability.

The print pattern of Day provides basic measuring features, which is an advantage. However, the print pattern of Day also bears a number of disadvantages. First, any stud placement using the markings 34 is imprecise in that the faces of the stud placement are not indicated in Day. Second, Day teaches a "measuring scale type device, and teaches measuring and physically marking stud locations; and thus "enable[s] the carpenter to see quickly and easily the measurements to be marked. Thus, under the Day teaching alone, any placement markings, which correspond to nominal stud thickness must be manually measured and marked anyway before studs are placed. Thus, Day fails to achieve Applicant's objective of replacing the skilled worker with an unskilled worker in laying out stud placement. Thus, Day operates contrary to Applicant's objectives.

However, Applicant also points out that, if Day were devoid of other markings away from the stud locator markings, thus to make the stud locator markings "visually conspicuous", it would not be effective for its intended purpose. Day teaches an invention "concern[ing] a lumber product adapted for use in the ***measuring, cutting, and assembling***...of a house or other structure (Day col 1, lines 35-37(emphasis added)). If a product of Day were devoid of the additional marking lines, it would cease to be an effective tool for measuring, or determining where to make cuts, and indeed would cease to meet the objectives stated in Day, and would therefore be outside the teaching of Day, indeed destroy the invention of Day.

Looking now at Thomas, one can see that the printing substrate tape is subject to poor stability, both in terms of dimensional stability, e.g. the tape can be stretched, and in terms of fixing the tape in position on a piece of conventional, e.g. unprinted, lumber. While the tape can be adhered to a substrate piece of lumber, as pointed out in detail in

Applicant's 2 appeal briefs and reply brief, the tape becomes quite mobile when construction forces are applied to the piece of lumber.

Disadvantages of tape:

1. *Tape will interfere with direct surface-to-surface contact* between the end of a stud and a side surface of the respective plate. Interference between the stud and the plate occurs any time the tape is located in a position between the stud and the plate. Interference can take any of a number of forms. In this case, probably the most relevant form of interference is that the adhesive on the tape can act as a lubricant between the stud and the plate, facilitating undesired movement of the stud with respect to the plate while the plate/stud assembly is being fabricated; and before the studs are secured in place with suitable fasteners.

2. *Lumber can be wet, oil, dusty, which can interfere with good adhesion between marking tapes and studs.* Even if the tape is adhered to the lumber, strength of such adherence can be so small as to be easily defeated by forces normally imposed during wall assembly.

3. *Marking tapes can move ahead of the stud as the stud is being installed.* Friction between the end of the stud and the side of the plate stretches that portion of the tape which is behind the movement of the end of the stud, and pushes on that portion of the tape which is ahead of the movement of the end of the stud.

Where the side-ways stretching force being exerted on the tape is sufficiently great that the stud does not slide with respect to the tape, either the tape will break, or the adhesive will be released from one of the tape substrate or the plate. Either way, the tape accordingly becomes useless for determining stud location on that portion of the tape. Where the tape is being pushed ahead of the end of the stud, such movement of the tape with respect to the plate makes the tape useless for the intended purpose of determining stud location on that portion the tape so affected.

The tape of Thomas, or Leary as asserted by the Examiner earlier, is subject to the above types of problems whereby it would not have been obvious to apply the tape of Thomas or Leary to the lumber of Day. In any event, the resulting combination of adding the print pattern of either Thomas or Leary, into Day, does not arrive at the claimed

invention -stud locator markings directly on the lumber product (all claims), visually conspicuous stud locator markings on the lumber (Applicant's independent Claims 1 and 65) or devoid of any marking indicators away from the stud locator markings (Applicant's independent Claim 23).

Nothing in the references makes it obvious to select the pattern of Thomas, now, any more than obvious to select the pattern of Leary, as earlier asserted by the examiner. As queried earlier by Applicant, why not the print pattern of Day? Day says he provides measurement features which avoid the need to carry tools. Is not that a good thing? Leary and Thomas say they provide tape products, and patterns, which can be applied to a wide variety of lumber products. So what in the references leads one of ordinary skill in the art to Applicant's selected combination?

Over the course of the examination, the examiner has selected a variety of reference combinations to assert obviousness or anticipation, as follows

09/27/01	Liang and Thomas
04/24/02	Varoglu and Thomas
04/09/03	Day
10/02/03	Day and Leary
03/29/04	Day and Leary
09/08/04	Day, and the combination of Day and Thomas

So which combination is it that makes the claimed invention obvious? While Applicant has made minor changes to the claims, the basic concept remains the same - print stud locator markings on the front surface of the piece of lumber in such pattern that the studs can be laid out, and attached to the plates, by unskilled labor, without the need for a skilled tradesman to make stud markings on the plates.

Certainly, it is easy in hindsight to say that some combination can be made which results in the claimed invention. But even that assertion is fraught with frailties of logic. Let's look at what combination can be made which arrives at the invention.

Without the benefit of either Applicant's teaching, or the suggestions of the examiner, a number of possible combinations can be contemplated. There are, as the examiner has suggested, combinations of Thomas and Liang, Thomas and Varoglu, Thomas and Day, Leary and Day. Which combination shall it be? And even as we arrive at a decision to make a combination of a specific two references, there is still the question of what the resulting combination should be.

Considering for the moment, combinations of Thomas and Day - Shall we apply the print pattern of Day over the print pattern, and on the substrate, of Thomas? If so, that does not provide the invention. The examiner may assert this is not a valid combination. But Applicant points out that we know that only in light of Applicant's invention, whereby such combination cannot be so easily ruled out.

Perhaps we should apply a half-width of the print pattern of Day to the tape of Thomas.

Perhaps we should replace the print pattern of Thomas with the print pattern of Day. No. That would sub-plant, namely destroy the objective of Thomas.

Perhaps we should add the print pattern of Thomas to that of Day. That would not arrive at the invention.

Perhaps we should add a half-width version of the print pattern of Thomas to that of Day. Again, that would not arrive at the invention.

Perhaps, as suggested by the examiner, we should replace the print pattern of Day with that of Thomas. No. As indicated above when using the Thomas substrate, total replacement of the print pattern of the reference destroys the objective of the reference.

Consider Day's teaching. Day teaches, as a whole, that measuring, inch-by-inch, is the primary feature of the invention. When you take away the measuring feature of Day, you no longer have Day, or any semblance of Day. Day has been destroyed.

Let's look a little deeper, at the steps required in arriving at a substrate of Day, printed with a print pattern of Thomas, which is what the examiner has asserted as being "obvious". As we will see, multiple steps must be stacked in series on each other.

1. Separate the print pattern from Day. All that is left is an unprinted piece of lumber. In so doing, the heart of the Day invention is destroyed.
2. Separate the print pattern from Thomas. Namely, separate the Thomas pattern from its very versatile tape substrate, a substrate which is susceptible to being mounted on virtually any piece of dimension lumber. In so doing, the heart of the Thomas invention is destroyed.
3. Add the print pattern, and not the tape substrate, of Thomas to the substrate of Day.

Applicant submits that the requirement to use 3 steps in combining references is solid evidence that the combination is outside the definition of "obvious" as set forth in 35 U.S.C. 103(a).

In addition, the fact that the combination destroys or nullifies the inventive feature of Day (measuring features) and destroys or nullifies the versatility of Thomas (no tape substrate) is further evidence that the combination is outside the definition of "obvious" as set forth in 35 U.S.C. 103(a). Applicant submits that the claimed invention cannot be shown to be obvious where one or more primary objectives of one or more references is mollified in the process.

As further evidence that the invention was not obvious in light of the references, Applicant invites the reader to consider the plight of the inventor when faced with the

desire, project of eliminating the need for a skilled and expensive "foreman" to make the stud markings on a plate. For the sake of addressing the issues raised by the examiner, let's stay with an analysis of Day and Thomas, though any other combination is believed to be similarly instructive.

Day teaches a measuring device which includes stud locator markings. But those markings are quite hidden in the clutter of the markings. Those markings 34 which are conspicuous do not indicate the locations for the front and back stud surfaces. In addition, Day teaches specifically that there are additional "*measurements to be marked*" (column 1 line 59). So Day does not teach or suggest any prospect of solving the labor-related objective.

Thomas teaches a flexible "tape" substrate which is printed with a desired pattern of stud locator markings. One easily visualizes the problems with the tape substrate, as discussed above. But for the moment, let's consider that those issues may be solvable, and look at implementation of the Thomas tape. How is it used? Answer - someone must determine the longitudinal placement of the tape on the plate. Can an unskilled worker simply adhere the tape anywhere along the length of the plate? No. At minimum, for each piece of plate lumber, one stud locator marking must be registered with the desired location of at least one of the studs. The tape must be applied with that level of tightness which ensures the correct dimensions between the respective studs. But the substrate is "masking tape" which is quite stretchy. Can the required level of dimensional precision be achieved by an unskilled worker? Applicant submits not. So Thomas does not teach or suggest any prospect of solving the labor-related objective.

In arriving at any conclusion regarding patentability, one must keep in mind the objective of the inventor's inquiry. Only by putting ourselves in the inventor's place, by asking the proper question of "what would a person of ordinary skill in the art do(?)", can we arrive at a proper conclusion regarding whether the references would have made the invention obvious. Pages 5-6 of Applicant's specification states the objects of the

invention. Referring to page 5 at lines 14-18, one of the objects is *to provide products wherein the stud locator markings...enable unskilled workers to recognize the desired spacings and lay out the studs....* Leary, too, recognizes that stud layout is ordinarily done by skilled workmen, and desires that such layout be done "by ordinary workmen" (col. 1 lines 20-26). Thomas merely states that a printed layout on a tape is a desired result.

Thus, the investigator of average skill in the art would be discouraged from looking further at Day or Thomas, or Leary, since none of these references offer any solution to the labor issue to be solved. Rather, only after the invention has been made can the public and the examiner see, in hindsight, the advantages provided by taking the inventive steps traversed by the inventor.


In addition to all the above, and considering the commonality of the examiner's arguments here to those made earlier, whether in previous Office Actions or in the Examiner's Answer dated 11/05/2002, considering the commonality of, considering the close resemblance of, the technical features of the references addressed earlier by the examiner as well as Applicant, to the technical features now being addressed by the examiner, Applicant refers to, and hereby incorporates by reference, all of the additional arguments already of record in Amendment A, in Amendment B, in Amendment C, in Amendment D, in Amendment E, in the Appeal Brief dated 08/19/2002, in the Reply Brief dated 01/03/2003, and in Appeal Brief 2 dated 06/22/2004.

Applicant thus submits that all claims as presented herein are allowable over all references of record. Allowance is respectfully solicited. No fee is believed to be due. Should any fee be properly due, or if any refund is due, kindly charge same, or credit any overpayment, to Deposit Account 23-2130.

In light of the already tortured course of the examination of this application, in the event the examiner still is inclined to not issue a Notice of Allowance, Applicant hereby specifically requests a personal interview with the combination of the Examiner and the

Examiner's Supervisor. To that end, Applicant's representative can be reached at the telephone numbers listed at the end of this document.

Respectfully submitted,
Fred Christian Baij

By: 
Thomas D. Wilhelm
Attorney for Applicant
(Reg. No. 28,794)

Customer Number: 23482

December 8, 2004
100 W. Lawrence Street, Third Floor
Appleton, Wisconsin 54911
920-831-0100

FAX: 920-831-0101

ame.f.doc